Microsoft
.net developer
training

Visual Studio® .NET – RAD for the Next Generation Web

Agenda: Day 1

- Module 01: What is Microsoft® .NET?
- ▶ Module 02: Visual Studio® .NET
- Module 03: The .NET Languages
- Module 04: Building ASP®.NET Applications
- Module 05: Using Data Access in .NET Applications
- Module 06: Object Oriented Concepts in .NET
- Module 07: Creating Windows Applications
- Module 08: Using XML in .NET

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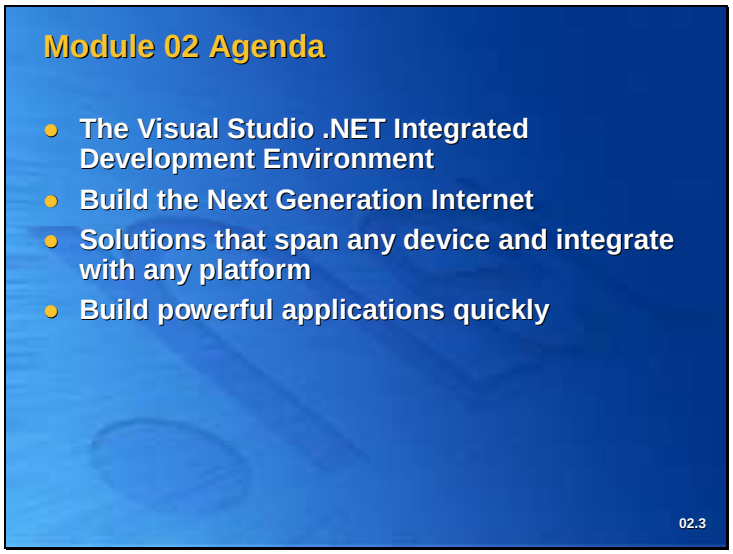
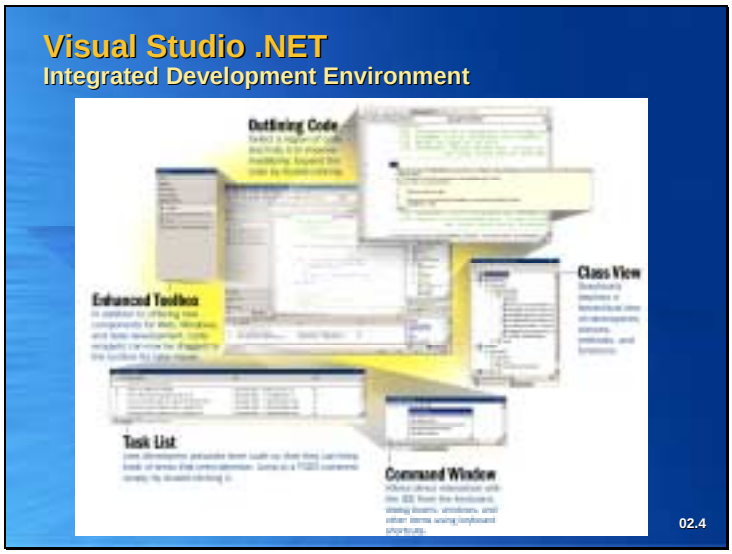

Module 02 Agenda
The Visual Studio .NET Integrated Development Environment
Build the Next Generation Internet
Solutions that span any device and integrate with any platform
Build powerful applications quickly
02.3

Module 02 Agenda

What you will learn:

- How the Visual Studio .NET Windows and Web Development Environment will make your tasks easier and make you more productive
- Build the Next Generation Internet
  - XML Web Services
  - High-performance database applications with XML
  - Build powerful server applications
- Solutions that span any device and integrate with any platform
  - Complete web development environment
  - Build powerful Windows applications
  - Develop for Handheld devices
- Build powerful applications quickly
  - Shared integrated development environment
  - Jump-start the development process
  - Choice of modernized languages that are simple to use, powerful, and productive



Visual Studio .NET

Integrated Development Environment Demo

Visual Studio .NET provides a host of productivity tools and enhancements that dramatically simplify the creation of applications for the Web as well as for Windows. Familiar development models such as drag-and-drop form creation combine with an extensive set of new features such as the fully integrated development environment, dynamic help and rich extensibility model to empower organizations with the ability to minimize time to market and stay ahead of the competition. In addition, consistent and unified programming models for broad-reach Web-based clients, rich-client interfaces and emerging smart devices enable developers to use a single paradigm for application design.

- Shared Integrated Development Environment
- Share a single toolbox, debugger and task window across Visual Basic, C++, and C# projects.
- Build solutions that span multiple languages and multiple projects with the shared Solution Explorer
- Reuse code using new cross-language inheritance

IntelliSense® Statement Completion helps you write your code and Squiggles tell you when your code is incorrect and how to fix it. IntelliSense, with its increased context sensitivity, provides an array of options that make language references accessible. When coding, it is no longer necessary to leave the text editor to perform searches on language elements, which means you can keep your context, find the necessary information and insert language elements directly into your code. IntelliSense is so advanced that it will complete your typing.

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Visual Studio .NET

Integrated Development Environment Demo

The Integrated Development Environment (IDE) of Visual Studio .NET saves development time and energy with a vast number of features including its ability to support many design tools and languages and to allow designers to create their own tools:

- Easier to write code
- Easier to share knowledge
- Leverage existing skills
- Customize the environment
- Macros and more powerful add-ins

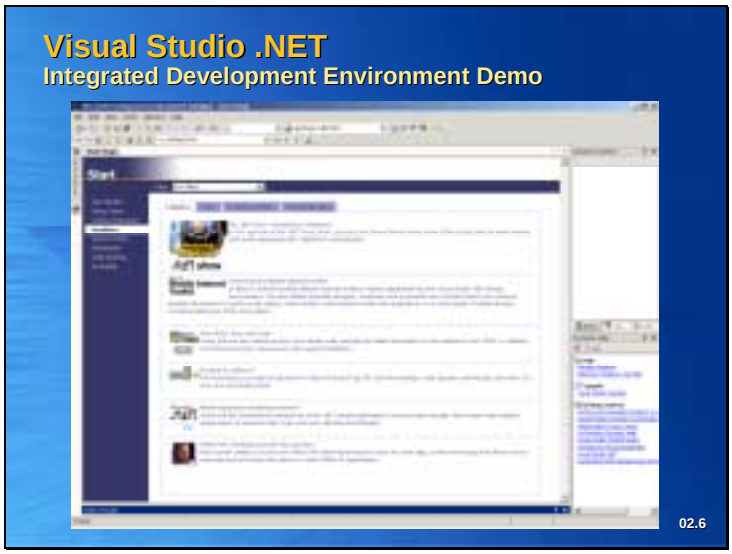
The integrated help system supports Microsoft Help 2.0 as well as Dynamic Help.

Microsoft Help 2.0

- Improves filtering, F1, searching and performance
- Attributed, consistent topics

Online Interface

- Developer community
- Headlines
- Search MSDN®



Visual Studio .NET

Integrated Development Environment Demo

The purpose of this demo is to show:

- Ease of use (windows, help)
- Tools (such as Object Browser and Class View)
- Start page integration
    - Start page
    - Home for Visual Studio .NET developer
    - Quick links to previous projects
    - Set your preferences
    - Easy navigation between documents using tabs
    - Dock-able and hide-able windows
    - New interactive windows (i.e.: Command)

Developer productivity is a vital ingredient for project success as today's fast-paced world demands that application delivery be quickened. Visual Studio .NET continues Microsoft's winning record of providing the most productive features including automating routine development tasks and assistance through features like **Dynamic Help**, which provides immediate related help information and the ability to track content, and enhanced **IntelliSense®**.

IntelliSense for HTML and XML

Customization for keyboard mapping and support for macros

Other features that will be covered as we move through the rest of the presentation:

- Command Window

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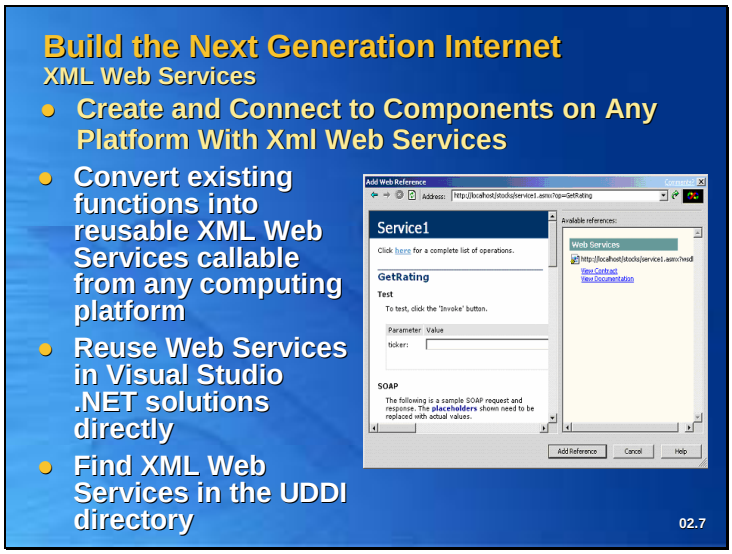
- Class View
- Object Browser
- Task List
- EZMDI
- AutoHide
- Docking
- Outlining (collapse to definitions)
- Line Numbering
- Go Back (go to definition and back)
- Inc. Search
- Clipboard Ring (related to text editor instead of general toolbox)
- Word Wrap


Build the Next Generation Internet
XML Web Services
Create and Connect to Components on Any Platform With Xml Web Services
Convert existing functions into reusable XML Web Services callable from any computing platform
Reuse Web Services in Visual Studio .NET solutions directly
Find XML Web Services in the UDDI directory
Add Web Reference
Service1
GetRating
Add Reference
Cancel
Help
02.7

Build the Next Generation Internet

XML Web Services

Create and Connect to Components on Any Platform with Xml Web Services

With **Visual Studio .NET**, Web development is simpler than ever. You will feel right at home with the IDE if you have used any other Microsoft IDEs.

Visual Studio .NET gives you an extremely comprehensive IDE and many great tools like the Forms Designer for Windows Forms and Web Forms, the XML Designer and plenty of wizards. You can work in the language of your choice and create the broadest range of applications and interfaces including browser, mobile devices and rich Windows clients.

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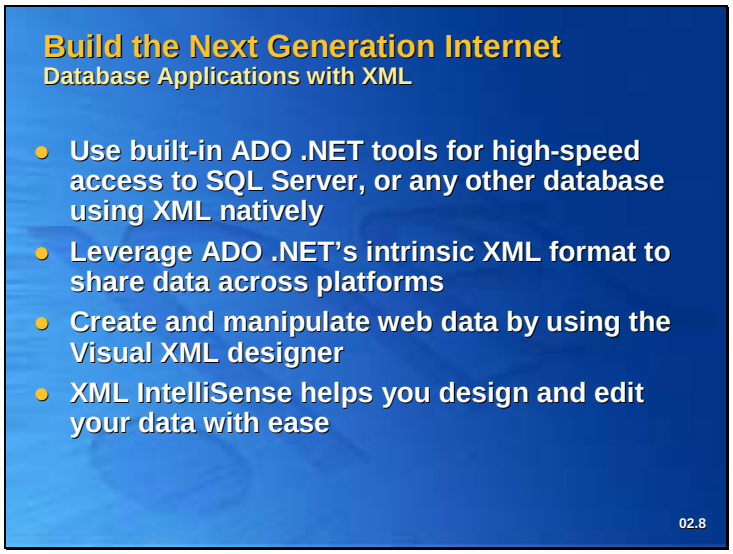
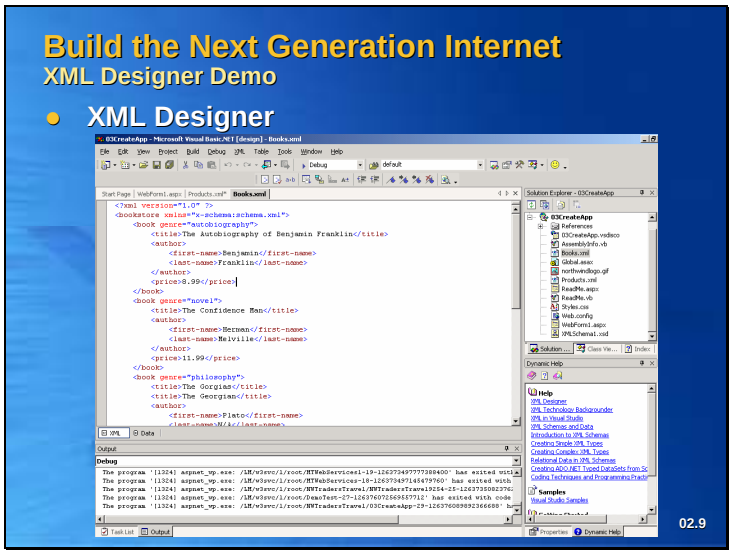

Build the Next Generation Internet
Database Applications with XML
Use built-in ADO .NET tools for high-speed access to SQL Server, or any other database using XML natively
Leverage ADO .NET's intrinsic XML format to share data across platforms
Create and manipulate web data by using the Visual XML designer
XML IntelliSense helps you design and edit your data with ease
02.8

Build the Next Generation Internet

Database Applications with XML

In this next generation of the Internet, where Web sites become programmable XML Web services, developers need to be able to expose any application as an XML Web service and to be able to seamlessly consume any XML Web service within their applications. Visual Studio .NET makes it simple to expose any method as an XML Web service. It also enables seamless integration of external XML Web services within the Visual Studio .NET IDE. Developers are faced with building many types of applications. Visual Studio .NET provides the most comprehensive set of tools for developers to build the broadest range of applications. With Visual Studio, developers can use a familiar programming approach for a broad range of user interfaces, including browser and mobile clients.



Build the Next Generation Internet

XML Designer Demo

The purpose of this demo is to illustrate the XML Designer:

- Drag and drop from Solution Explorer
- Editing files in XML and relational view
- Saving files
- Discuss how features in Visual Studio Designer (grid) can be built in Windows Applications.

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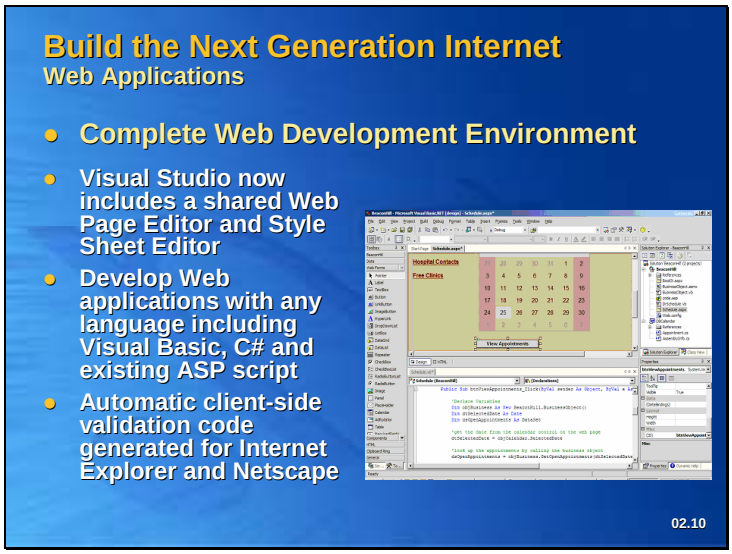

Build the Next Generation Internet
Web Applications
Complete Web Development Environment
Visual Studio now includes a shared Web Page Editor and Style Sheet Editor
Develop Web applications with any language including Visual Basic, C# and existing ASP script
Automatic client-side validation code generated for Internet Explorer and Netscape
02.10

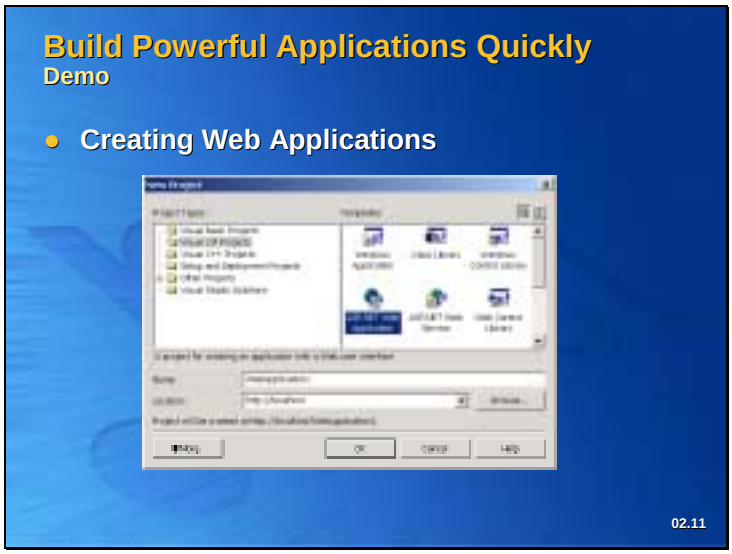
Build the Next Generation Internet

Web Applications

Visual Studio now includes a shared Web Page Editor and Style Sheet Editor so there is no need to leave the IDE when switching from code editing to HTML and CSS editing. Also, the code behind page keeps your code separate from the HTML on the page, this preserves the simplicity of the HTML pages and the clarity of your code.

Building a Web application in the .NET language of your choice is as easy as selecting New, Project.

Visual Studio .NET IntelliSense automatically performs schema validation in the editor for different HTML targets like Internet Explorer and Netscape. You can specify a specific HTML version for your code or create HTML 3.2 by default.



Build Powerful Applications Quickly

Demo

Creating Web Applications

The purpose of this demo is to show that **creating a Web Application** using Visual Studio .NET automatically creates:

- A virtual directory and
- An application directory structure

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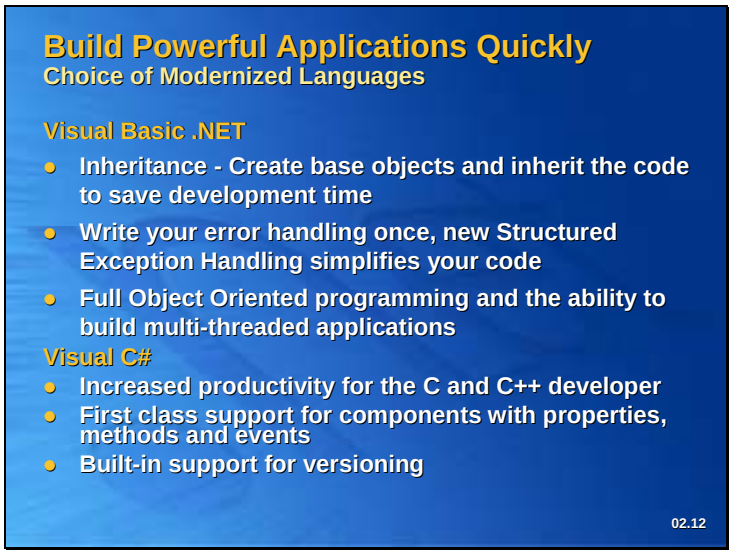
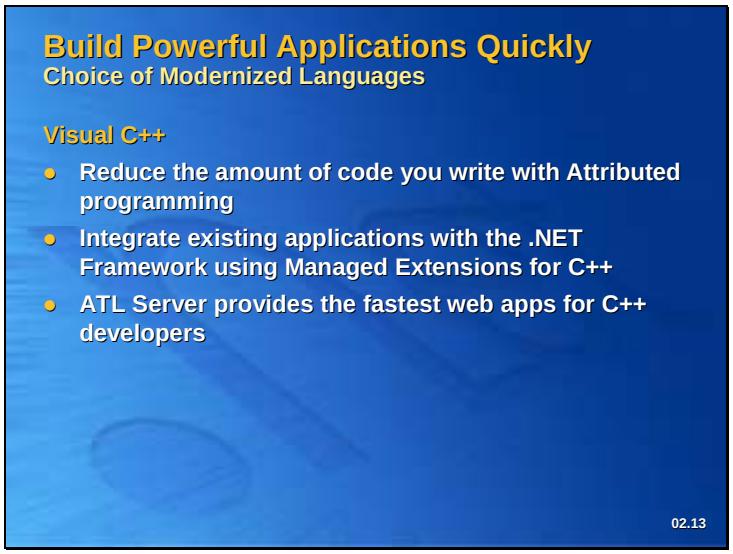

Build Powerful Applications Quickly
Choice of Modernized Languages
Visual Basic .NET
Inheritance - Create base objects and inherit the code to save development time
Write your error handling once, new Structured Exception Handling simplifies your code
Full Object Oriented programming and the ability to build multi-threaded applications
Visual C#
Increased productivity for the C and C++ developer
First class support for components with properties, methods and events
Built-in support for versioning
02.12

Build Powerful Applications Quickly

Choice of Modernized Languages

Visual Studio .NET provides you with a choice of languages, that are simple to use, and powerful. Today's dynamic business environment demands that applications be delivered quickly, maintained easily and upgraded frequently. In this setting, maximizing developer productivity is a crucial component of success.

Visual Studio .NET addresses these needs by providing a host of productivity tools and enhancements that dramatically simplify the creation of applications for the Web as well as for Windows. Familiar development models such as drag-and-drop form creation combine with an extensive set of new features such as the fully integrated development environment, dynamic help and rich extensibility model to empower organizations with the ability to minimize time to market and stay ahead of the competition. In addition, consistent and unified programming models for broad-reach Web-based clients, rich-client interfaces and emerging smart devices enable developers to use a single paradigm for application design.


Build Powerful Applications Quickly
Choice of Modernized Languages
Visual C++
Reduce the amount of code you write with Attributed programming
Integrate existing applications with the .NET Framework using Managed Extensions for C++
ATL Server provides the fastest web apps for C++ developers
02.13

Build Powerful Applications Quickly

Choice of Modernized Languages

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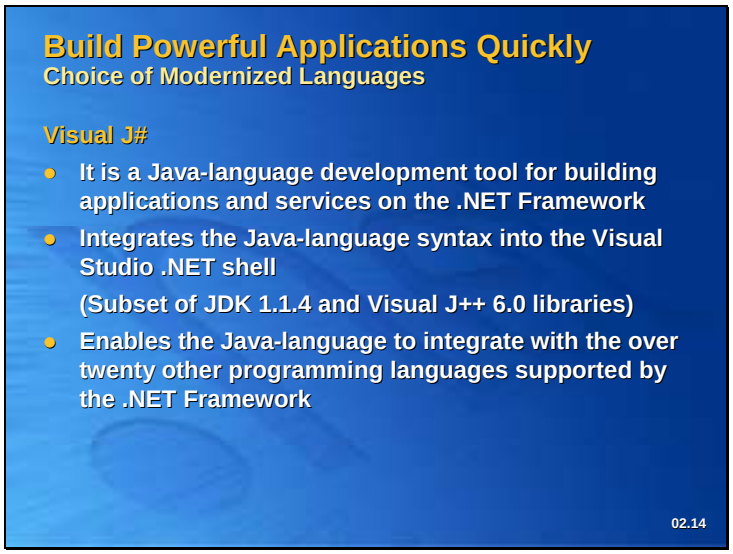
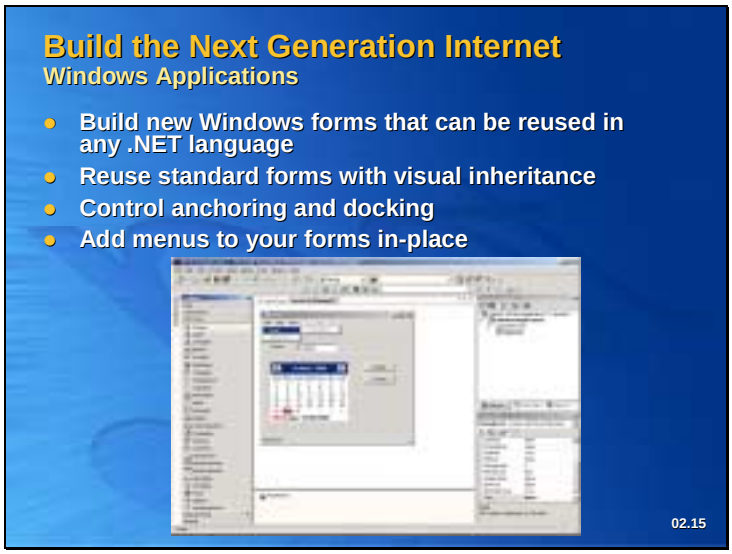

Build Powerful Applications Quickly
Choice of Modernized Languages
Visual J#
It is a Java-language development tool for building applications and services on the .NET Framework
Integrates the Java-language syntax into the Visual Studio .NET shell
(Subset of JDK 1.1.4 and Visual J++ 6.0 libraries)
Enables the Java-language to integrate with the over twenty other programming languages supported by the .NET Framework
02.14

Build Powerful Applications Quickly

Choice of Modernized Languages

Microsoft Visual J#® .NET is a Java-language development tool for building applications and services on the .NET Framework. It integrates the Java-language syntax into the Visual Studio .NET shell, and enables the Java-language to integrate with the over twenty other programming languages supported by the .NET Framework. The version of Java language syntax integrated in .NET is a subset of JDK 1.1.4 and Visual J++ 6.0 libraries.


Build the Next Generation Internet
Windows Applications
Build new Windows forms that can be reused in any .NET language
Reuse standard forms with visual inheritance
Control anchoring and docking
Add menus to your forms in-place
02.15

Build the Next Generation Internet

Windows Applications

Windows Forms is a new forms package that enables developers building Windows-based applications to take full advantage of the rich user interface features available in the Microsoft Windows operating system. Windows Forms is part of the new .NET Framework and takes advantage of many new technologies including a common application framework, managed execution environment, integrated security and object-oriented design principles. With the new shared development environment in Visual Studio, developers will be able to create Windows Forms applications using any of the languages supporting the .NET Framework, including Visual Basic .NET and Visual C#, and Visual J#.

Visual inheritance is one of the key new features available in Windows Forms that will enhance developer productivity and facilitate code reuse.

Features such as the Menu Designer, **Control Anchoring, Control Docking** and many new controls enable a higher level of power and precision for developers building rich Windows-based user interfaces

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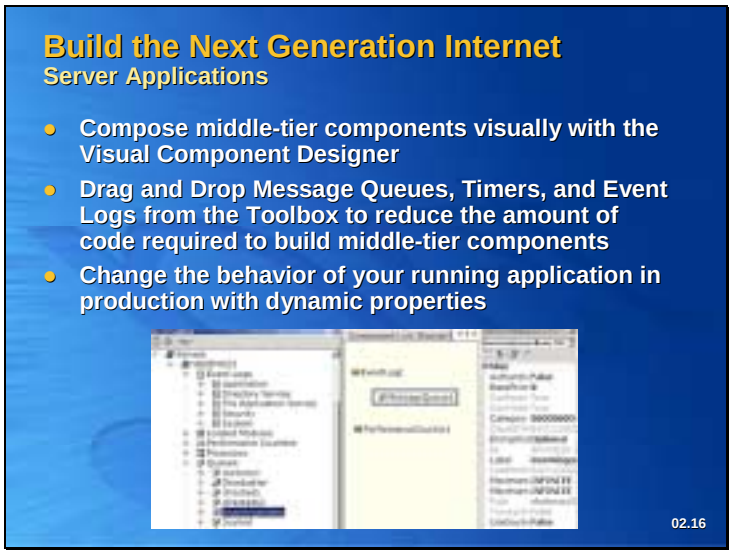
Build the Next Generation Internet
Server Applications
Compose middle-tier components visually with the Visual Component Designer
Drag and Drop Message Queues, Timers, and Event Logs from the Toolbox to reduce the amount of code required to build middle-tier components
Change the behavior of your running application in production with dynamic properties
02.16

Build the Next Generation Internet

Server Applications

One of the most complex tasks in developing distributed applications is building server-side components that implement the business logic of an application. To complete this process, Visual Studio .NET employs Rapid Application Development principles and applies the paradigm to component development.

Solutions That Span Any Device
Develop for Handheld Devices
Thin Client Devices: Internet Enabled Devices
Build a single mobile web interface to support a broad range of Web devices
Server side mobile controls intelligently generate the appropriate rendering and pagination for the target web device
02.17

Solutions That Span Any Device

Develop for Handheld Devices

The Microsoft Mobile Internet Toolkit insulates developers from the details of wireless technology. Thus, developers can quickly and easily build a single mobile Web application that delivers appropriate markup for a wide variety of mobile devices.

The Mobile Internet Toolkit contains the following:

- Mobile Web Forms controls that generate a markup language for different devices
- Mobile Internet Designer that works with the Visual Studio .NET IDE provides a drag-and-drop mobile development environment.
- Rich browser capabilities that extend ASP.NET device capabilities to mobile devices
- QuickStart tutorial with sample code
- Developer documentation
- Device adapter code samples

Support includes WML 1.1 for a WAP cell phone, cHTML, for I-mode, HTML for Pocket PC, PalmTM and Pagers

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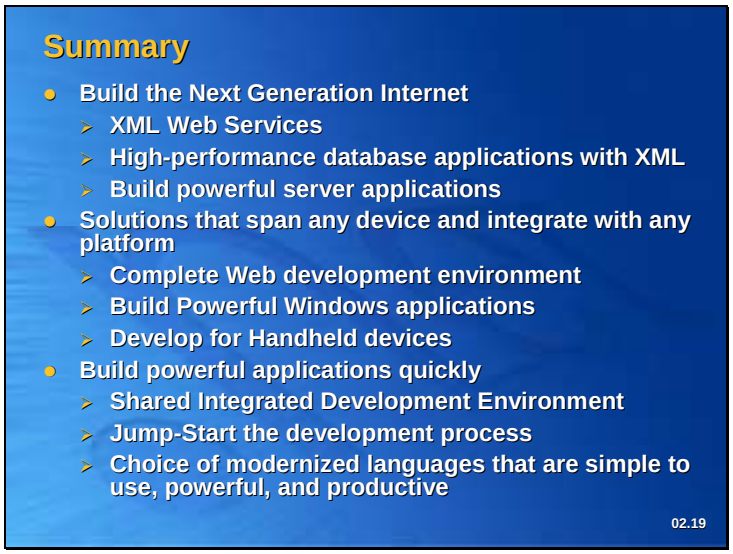
Shared Extensible Tools

Extensibility and Partners

Visual Studio .NET provides a new unified IDE for all the programming languages within it. It was designed to help developers build their solutions faster with less clutter and with all of the tools easily accessible in any of the languages used with Visual Studio. In addition, the unified IDE greatly simplifies a task that many development shops face today: management and delivery of Multilanguage solutions. It combines the best elements of the IDEs from individual tools (Visual Basic, Visual C++, etc) with new integrated features such as the end-to-end debugger to provide developers with a consistent, fully customizable development environment.

Microsoft Partners' developing tools: Rational, CompuWare and Crystal

Partners' developing languages: Fujitsu and ActiveState


Summary
Build the Next Generation Internet
XML Web Services
High-performance database applications with XML
Build powerful server applications
Solutions that span any device and integrate with any platform
Complete Web development environment
Build Powerful Windows applications
Develop for Handheld devices
Build powerful applications quickly
Shared Integrated Development Environment
Jump-Start the development process
Choice of modernized languages that are simple to use, powerful, and productive
02.19

Summary

- Most productive developer platform
  - Leverage existing skills
  - RAD for the Internet
- Flexible and Integrated Development Environment
- Integration and operations in XML, SOAP and XLANG
- Complete scalable developer platform
  - RAD tools that help build scalable applications quickly
  - Tools and Device-Client-Server-Services
- Leverage hand-held devices and integrate with other computing platforms

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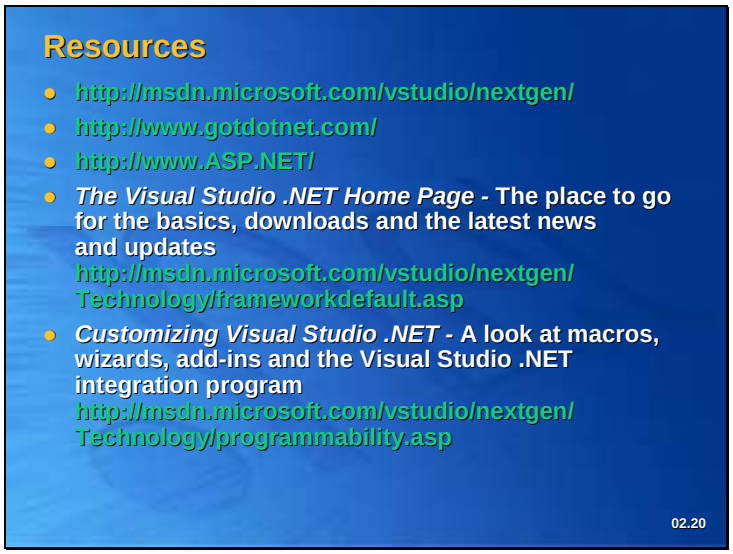

Resources
http://msdn.microsoft.com/vstudio/nextgen/
http://www.gotdotnet.com/
http://www.ASP.NET/
The Visual Studio .NET Home Page - The place to go for the basics, downloads and the latest news and updates http://msdn.microsoft.com/vstudio/nextgen/Technology/frameworkdefault.asp
Customizing Visual Studio .NET - A look at macros, wizards, add-ins and the Visual Studio .NET integration program http://msdn.microsoft.com/vstudio/nextgen/Technology/programmability.asp
02.20

Resources

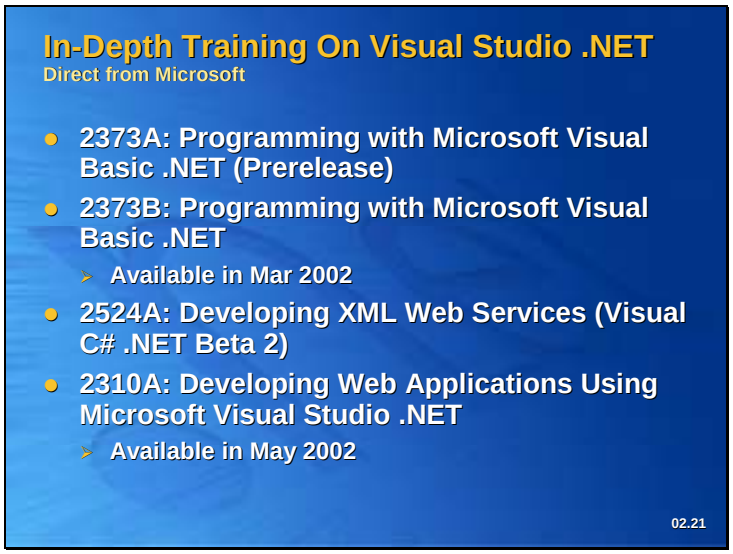
http://msdn.microsoft.com/vstudio/nextgen/

http://www.gotdotnet.com/

http://www.ASP.NET/

The Visual Studio .NET Home Page - The place to go for the basics, downloads and the latest news and updates http://msdn.microsoft.com/vstudio/nextgen/Technology/frameworkdefault.asp

Customizing Visual Studio .NET - A look at macros, wizards, add-ins and the Visual Studio .NET integration program http://msdn.microsoft.com/vstudio/nextgen/Technology/programmability.asp


In-Depth Training On Visual Studio .NET
Direct from Microsoft
2373A: Programming with Microsoft Visual Basic .NET (Prerelease)
2373B: Programming with Microsoft Visual Basic .NET
Available in Mar 2002
2524A: Developing XML Web Services (Visual C# .NET Beta 2)
2310A: Developing Web Applications Using Microsoft Visual Studio .NET
Available in May 2002
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